

What is claimed is:

1. A method of identifying a mobile terminal in a mobile communications network,
the method comprising:
 - determining an international mobile station identity (IMSI) for a mobile terminal, the IMSI
5 comprising a mobile country code (MCC), a mobile network code (MNC) and a mobile station
identifier number (MSIN);
 - determining a first field having a first fixed length and containing the MCC;
 - determining a second field having a second fixed length and containing at least a part of
the MNC;
 - 10 determining a third field having a third fixed length containing the MSIN and at least one
padding value, when length of the MSIN is less than the third fixed length,
wherein when the length of the MNC is greater than the second fixed length, then
the MNC is parsed into at least a first part and a second part, so that the second field
comprises the first part and the third field comprises the MSIN and the second part; and
15 wherein, when total length of the MSIN and the second part is less than the third
fixed length, then at least one padding value is added to the third field; and
transmitting the first, second and third fields to the mobile communications network.
2. The method of claim 1, wherein when length of the MNC is equal to the second
20 fixed length, the second field comprises the MNC, and the third field comprises the MSIN.
3. The method of claim 1, wherein sum of the first fixed length, the second fixed
length and the third fixed length is equal to 15 digits.

4. The method of claim 1, wherein the first fixed length is equal to 3.

5. The method of claim 1, wherein the second fixed length is at least 2.

5

6. The method of claim 1, wherein the third fixed length is 10.

7. The method of claim 1, wherein the first part of the MNC comprises most significant digits of the MNC.

10

8. The method of claim 1, wherein the second part of the MNC comprises least significant digit of the MNC.

9. The method of claim 1, wherein when length of the MNC is greater than the
15 second fixed length, and when total length of the MSIN and the second part is less than the third
fixed length, then the at least one padding value is added to the third field between the MSIN
and the second part.

10. The method of claim 1, wherein when length of the MNC is not greater than the
20 second fixed length, and when total length of the MSIN is less than the third fixed length, then
the at least one padding value is inserted in most significant position of the third field.

11. A system using a data structure for identifying a mobile communications device

in a cdma2000 network, the data structure comprising at least one of a first field, a second field, and a third field, wherein:

the first field comprises an X-digit mobile country code (MCC) for identifying a country to

5 which the mobile communications device belongs;

the second field comprises a Y-digit mobile network code (MNC) for identifying a network to which the mobile communications device belongs, when Y is not greater than length of the second field;

the second field comprises at least a first part of the Y-digit MNC, when Y is greater than

10 length of the second field;

and

the third field comprises:

a second part of the Y-digit MNC, when Y is greater than length of the second field;

15 a Z-digit mobile station identification number (MSIN) for identifying the mobile communications device in the network; and

padding bits, when $Z + \text{length of the second part of the Y-digit MNC}$ is smaller than length of the third field (IMSI_S).

20 12. The system of claim 11, wherein the first part of the MNC comprises most significant digits of the MNC.

13. The system of claim 11, wherein the second part of the MNC comprises least significant digits of the MNC.
14. The system of claim 11, wherein least significant positions in the third field
5 comprise the MSIN.
15. The system of claim 11, wherein most significant positions of the third field comprise the second part of the MNC, when Y is greater than the length of the second field.
- 10 16. The system of claim 11, wherein most significant positions of the third field (IMSI_S) comprise the padding bits, when Y is not greater than the length of the second field.
- 15 17. The system of claim 11, wherein X is equal to 3.
18. The system of claim 11, wherein Y is equal to at least 2.
19. The system of claim 11, wherein $X + Y + Z$ is less than 16.
20. The system of claim 11, wherein the first part of the MNC is 2 digits, and the
20 second part of the MNC is 1 digit.
21. A method for identifying a mobile communications device in a mobile communications network, the method comprising:

determining an identifier for a mobile communications device, the identifier comprising at least one of a first field, a second field, and a third field;

including in the first field a mobile country code (MCC) for identifying a country to which the mobile communications device belongs;

5 including in the second field a mobile network code (MNC) for identifying a network to which the mobile communications device belongs in the country;

including in the third field a mobile station identification number (MSIN) for identifying the mobile communications device in the network; and

including padding values in the third field, when length of the MSIN is less than length of 10 the third field.

22. The method of claim 21, wherein the padding values are added to most significant side of the MSIN, in the third field.

15 23. The method of claim 21, further comprising:
dividing the MNC into a first part and a second part, when length of MNC is larger than length of the second field.

24. The method of claim 23, further comprising:
20 including the second part of MNC in the third field.

25. The method of claim 23, further comprising:
including the first part of MNC in the second field.

26. The method of claim 24, wherein the second part of MNC is included in most significant portion of the third field.

5 27. The method of claim 26, wherein the padding values are added between the second part of MNC and the MSIN, when total length of the MSIN and the least significant digit of MNC is smaller than the length of the third field.

10 28. The method of claim 21, wherein the padding values are added to the most significant portion of the third field, when MSIN is smaller than the length of the third field and when MNC is not larger than length of the second field.